NORYL™ RESIN PCN2910

REGION ASIA

DESCRIPTION

NORYL™ PCN2910 resin is a 35% glass/mica filled blend of polyphenylene ether (PPE) + high impact polystyrene (HIPS). This high modulus, injection moldable grade contains non-brominated, non-chlorinated flame retardant and carries a UL94 flame rating of 5VB at 2.3mm, V0 at 3mm, and V1 at 1.5mm. NORYL PCN2910 resin exhibits good dimensional stability, low specific gravity, and Low Warpage. It is an excellent candidate for printer chassis applications where high modulus and tight tolerance molding are required.

TYPICAL PROPERTY VALUES

Revision 20190717

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL			
Tensile Stress, yld, Type I, 5 mm/min	123	MPa	ASTM D 638
Tensile Stress, brk, Type I, 10 mm/min	115	MPa	SABIC - Japan Method
Tensile Strain, brk, Type I, 5 mm/min	1.5	%	ASTM D 638
Tensile Strain, yld, Type I, 10 mm/min	5	%	SABIC - Japan Method
Tensile Modulus, 5 mm/min	11370	MPa	ASTM D 638
Flexural Stress, yld, 2.6 mm/min, 100 mm span	159	MPa	ASTM D 790
Flexural Modulus, 2.6 mm/min, 100 mm span	8940	MPa	ASTM D 790
Tensile Stress, yield, 5 mm/min	106	MPa	ISO 527
Tensile Strain, break, 5 mm/min	1.3	%	ISO 527
Tensile Modulus, 1 mm/min	10600	MPa	ISO 527
Flexural Stress, yield, 2 mm/min	160	MPa	ISO 178
Flexural Modulus, 2 mm/min	9130	MPa	ISO 178
IMPACT			
Izod Impact, unnotched, 23°C	331	J/m	ASTM D 4812
Izod Impact, notched, 23°C	68	J/m	ASTM D 256
Instrumented Impact Total Energy, 23°C	7	J	ASTM D 3763
Izod Impact, unnotched 80*10*4 +23°C	14	kJ/m²	ISO 180/1U
Izod Impact, notched 80*10*4 +23°C	5	kJ/m²	ISO 180/1A
Charpy Impact, notched, 23°C	4	kJ/m²	ISO 179/2C
Charpy 23°C, Unnotch Edgew 80*10*4 sp=62mm	20	kJ/m²	ISO 179/1eU
THERMAL			
Vicat Softening Temp, Rate B/50	140	°C	ASTM D 1525
HDT, 1.82 MPa, 6.4 mm, unannealed	125	°C	ASTM D 648
CTE, -30°C to 30°C	0.000021 – 0.000033	1/°C	TMA
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	129	°C	ISO 75/Af
Relative Temp Index, Elec [1]	65	°C	UL 746B
Relative Temp Index, Mech w/impact [1]	65	°C	UL 746B
Relative Temp Index, Mech w/o impact [1]	65	°C	UL 746B
PHYSICAL			
Specific Gravity	1.38	-	ASTM D 792
Mold Shrinkage, flow	0.25 – 0.3	%	SABIC method
Melt Flow Rate, 300°C/2.16 kgf	11	g/10 min	ASTM D 1238

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FLAME CHARACTERISTICS [1]			
UL Yellow Card Link	E207780-228572	-	-
UL Yellow Card Link 2	E45587-237063	-	-
UL Recognized, 94-5VB Flame Class Rating	≥2.3	mm	UL 94
UL Recognized, 94V-0 Flame Class Rating	≥3	mm	UL 94
UL Recognized, 94V-1 Flame Class Rating	≥1.5	mm	UL 94
INJECTION MOLDING			
Drying Temperature	105 – 110	°C	
Drying Time	3 – 4	hrs	
Drying Time (Cumulative)	8	hrs	
Maximum Moisture Content	0.02	%	
Melt Temperature	295 – 315	°C	
Nozzle Temperature	295 – 315	°C	
Front - Zone 3 Temperature	280 – 315	°C	
Middle - Zone 2 Temperature	270 – 310	°C	
Rear - Zone 1 Temperature	260 – 305	°C	
Mold Temperature	75 – 105	°C	
Back Pressure	0.3 – 0.7	MPa	
Screw Speed	20 – 100	rpm	
Shot to Cylinder Size	30 – 70	%	

(1) UL Ratings shown on the technical datasheet might not cover the full range of thicknesses and colors. For details, please see the UL Yellow Card.

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